



DERMATOLOGY.

Sporotrichosis as a clinical entity has only lately come to be recognised as comprising a large group of lesions dependent upon a definite infection comparable to granulomata, such as syphilis, tuberculosis, and actinomycosis.

In England little has been heard of the disease, perhaps owing to its extreme rarity; but in France de Beurmann and others have devoted much time and pains to the separation of this condition from those with which until 1903 it had always been confused and grouped.

The polymorphism of sporotrichosis is equal to that of either syphilis or tuberculosis. As de Beurmann writes: "Sporotrichosis starts in the great majority of cases without affecting the general health, without fever, gastro-intestinal troubles, or wasting; the disease confines itself to cutaneous or subcutaneous localisations. . . . The lesions in or beneath the skin evolve slowly and coldly. . . . Still, all the observations do not agree with this usual type of a chronic and torpid affection. There are sporotrichoses with a sudden onset marked by general disturbance and fever; as in acute infections the appearance of the lesions is rapid and simultaneous, constituting a true eruption. Others, after an onset more or less sudden, continue under the form of febrile attacks, with profound interference with the general health, gastro-intestinal troubles, wasting, etc., each recrudescence of the disease being accompanied by a fresh gummatous eruption. Others run a subacute course, with wasting and severe anæmia. In all these cases the mycosis behaves like an acute or subacute general infection; it resembles the coccal septicæmias with cutaneous metastases." Such, briefly, is the epitome of de Beurmann.¹

The first cases recognised were published in America by Schenck,² and by Hektoen and Perkins,³ under the title of "Refractory subcutaneous abscesses caused by sporothrix Schenckii. A new pathogenic fungus," a description given by Schenck which has been wholly confirmed by subsequent observations. This previously unknown disease, which had long been

¹ De Beurmann and Gougerot, *Ann. de Dermat. et Syph.*, 1909, x, 83.

² Schenck, *Bull. Johns Hopkins Hosp.*, 1898, ix, 286 (with plates).

³ Hektoen and Perkins, *J. Exper. M.*, 1900, v, 77 (with plates).

confused with tuberculosis and syphilis, aroused great interest; but the original observations were not followed up in the United States.

The first three cases described were due to obvious local inoculation: a scratch of the skin of the finger by a nail (Schenck), a blow upon the finger by a hammer (Perkins), and puncture of the finger by a piece of wire (Brayton). From this inoculation indolent abscesses resulted, both locally and in the course of the lymphatics, which proved characteristically refractory to surgical treatment, and were ultimately shown to contain a fungus now identified by the name of *sporotrichum Beurmanni*.

Adamson¹ has recently summed up our knowledge of this specific infection, and from his paper the following description is worth quoting: "The cases fall into two main clinical types—the American cases with a primary local infection and a line of chronic abscesses in the arm, connected by a train of chronic lymphangitis. In the second group, the French cases, there were multiple and widely distributed abscesses generally hypodermic, but sometimes associated with these dermic and epidermic lesions."

De Beurmann describes a syphiloid type and a tuberculoid type according as the lesions simulate syphilitic gummata or tuberculosis verrucosa. The lymphatic glands are generally uninvolved.

It has not been demonstrated that the viscera in man are ever infected, though de Beurmann and Gougerot have produced visceral infections in animals.

In one case which showed *sporotrichum* in the sputum the lungs were sound. In other cases cutaneous sporotrichosis has occurred in association with pulmonary tuberculosis.

Recently cases have been recorded in which gummata were present, acute or chronic osteitis, periostitis, osteomyelitis, arthritis and synovitis.² Lesions of the mucous membrane have been reported, and also the presence of *sporotrichum* in the buccopharynx and larynx without causing lesions.

In the diagnosis the main points to observe are multiplicity of lesions, indolence, slow involution, firm consistence, viscid grey yellow homogeneous pus, swollen margins with central fistulous opening into the cavity, generally absence of enlarged glands, good general health. The crateriform character of the lesions is especially characteristic. In those cases where the base of the exposed cavity is crusted or vegetating, simulating cutaneous tuberculosis, sporotrichosis is suspected from the central softening of the lesions, and from the occurrence of more typical gummata elsewhere. Sporotrichosis must be considered,

¹ Adamson, *Brit. J. Dermat.*, 1908, xx, 296 (with Bibliography).

² De Beurmann, Gougerot and Vaucher, *Rev. de Chirurg.*, 1909, xxix, 4, p. 661 (with plates).

too, in the presence of gummatous periosteal swelling and chronic intra-muscular abscesses.

The diagnosis is readily made by cultural methods, remembering the importance of using suitable media (Sabouraud's peptone-glucose-agar), of not capping the tubes, and of incubating at ordinary room temperature.

In culture, colonies appear on the fourth to sixth day as small white acuminate points 1 mm. in diameter, surrounded by a white areola, finely rayed. They slowly increase in size, and become convoluted and brown in colour. Films from cultures show long filaments 2 μ broad, together with numerous ovoid spores 5 to 6 μ in length by 3 to 4 μ broad. Here and there single spores or bunches of three to thirty are seen attached to the mycelial filament by a short pedicle.¹ De Beurmann has shown that an early orchitis in the rat, after inoculation with suspected products, is diagnostic of sporotrichial infection.

In addition to this description of Adamson, other means of diagnosis may be mentioned. (1) Sporo-agglutination by the serum of patients affected with sporotrichosis,² (2) presence of the parasites in the blood,³ (3) fixation of complement,⁴ (4) determination of the opsonic index to the sporotrichum.⁵

As to the habitat of the parasite, de Beurmann and Gougerot have found in two different parts of the French Alps three specimens of the *sporotrichum Beurmanni* as a vegetable parasite.

The histology of the lesions is that of tubercle or syphilis. The lesions present three types of reaction in combination:—

- (1) Lympho-connective tissue or syphiloid reaction.
- (2) An epithelioid (with giant cells) or tuberculoid reaction.
- (3) A polynuclear or ecthymatiform reaction.

The histology of this disease tends to destroy the contention that there is any specific histology of either syphilis or tubercle, for all the changes seen in these diseases are seen here. As de Beurmann and Gougerot say, "There is no such thing as anatomical specificity; there is only specificity of the causal parasite. The *sporotrichum Beurmanni* and the bacillus of Koch produce an identical nodule."⁶

Of treatment Adamson says: "It is characteristic of the lesions that they are remarkably obstinate to the ordinary surgical methods of treatment. Under the administration of iodides they rapidly disappear."

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¹ See also *Brit. M. J.*, 1908, ii. Epit., p. 79.

² Widai and Abrami, *Bull. de la Soc. Med. des Hôp. de Paris*, 1908, 947.

³ Widai and Weill, *Gaz. d. Hôp.*, 1908, lxxxii, 847.

⁴ Widai and Joltrain, *Ibid.*, 1649.

⁵ Caussade, *Ibid.*, 920.

⁶ De Beurmann and Gougerot, abstract in *Brit. J. Dermat.*, 1908, xx, 202.

